

ABSTRACT

The present invention relates to a method and apparatus for cooling intake air prior to entry into a combustion chamber of a boosted internal combustion engine. The invention provides an air intake system comprising a cooler disposed in an intake passage downstream of a charger; a bypass passage for communication between a portion of said intake passage located upstream of said cooler and a portion of said intake passage located downstream of said cooler so as to allow a flow of air discharged from the charger to bypass the cooler; a bypass control valve disposed in said bypass passage to open and close the bypass passage and a flow restriction disposed in the bypass passage limiting the flow in the event that the bypass control valve remains in an open position.